

AMENDMENTS TO THE CLAIMS

1-41. (Cancelled)

42. (Currently Amended) A network control system in an AVC system to which a plurality of AV apparatuses are connected via a transmission line, said network control system comprising:

a controller equipped with a user interface; and

a device operable to be controlled;

wherein said device has in-device apparatus information and version information which is indicative of a version of the in-device apparatus information to be updated when the in-device apparatus information is updated;

wherein said controller is operable to check the version information inside said device, to read the in-device apparatus information and the version information inside said device from said device, and to detect a change inside said device based on the read version information;

wherein when said controller detects the change inside said device, said device is operable to automatically send updated version information, which is indicative of a version of updated in-device apparatus information, to said controller;

wherein every time a change in state in said device occurs, said device is operable to spontaneously or automatically send the updated version information which is indicative of the change in the state in said device to said controller, without sending a user input request message from said controller to said device;

wherein said controller is operable to receive and read the updated version information so that the updated version information is instantly displayed; and

wherein the checking of the version information inside said device is exclusively performed by said controller and is not performed by said device.

43. (Previously Presented) The network control system according to claim 42, wherein: the in-device apparatus information is state information showing a condition of said device;

said device has the state information showing the condition of said device and version information which shows a version of the state information to be updated when the state information is updated; and

 said controller is operable to read the state information and the version information from said device and to detect a change of said device based on the read version information.

44. (Previously presented) The network control system according to claim 43, wherein said controller is operable to

 issue a notification request to said device for requesting notification of a change of the state information when said controller uses the state information of said device,

 receive the version information from said device as a primary response to the notification request, and

 receive updated version information from said device as a secondary response to the notification request when the state information is changed in said device.

45. (Previously Presented) The network control system according to claim 44, wherein said controller is operable to read the state information between receipt of the primary response and the secondary response.

46. (Previously Presented) The device according to claim 45, wherein said device is operable to

 return the version information as the primary response to the notification request from said controller,

 return the updated version information as the secondary response of the notification request when the state information is changed in the device, and

 read the state information between the primary response and the secondary response.

47. (Previously Presented) The controller according to claim 45, wherein when said controller receives, as the primary response of the notification request, the version information that indicates the version of the state information, said controller is operable to receive the updated version information as the secondary response of the notification request when operation

screen information, which shows an operation screen of said device, is changed in said device, and to read the state information of said device between receipt of the primary response and the secondary response.

48. (Previously Presented) The network control system according to claim 44, wherein the secondary response from said device contains the updated version information and updated state information.

49. (Previously Presented) The network control system according to claim 42, wherein:
the in-device apparatus information of said device is operation screen information which shows an operation screen of said device;

 said device has the operation screen information of said device and the version information showing a version of the operation screen information when the operation screen information is updated; and

 said controller is operable to read the operation screen information and the version information from the device, and to detect a change of the operation screen of said device based on the read version information.

50. (Previously Presented) The network control system according to claim 49, wherein the operation screen information comprises a plurality of objects, and
wherein said controller is operable to

 issue a notification request to said device for requesting notification of changes of the operation screen information when the operation screen information of said device is displayed on the display screen,

 receive the version information as a primary response to the notification request, and

 receive the updated version information as a secondary response to the notification request when the operation screen information is changed in said device.

51. (Previously Presented) The network control system according to claim 50, wherein the secondary response from said device contains the updated version information and updated object information.

52. (Previously Presented) The device according to claim 50, wherein the operation screen information comprises a plurality of objects, and

wherein said device is operable to return the version information as a primary response to the notification request from said controller, and to return the updated version information as a secondary response to the notification request when the operation screen information is changed in said device.

53. (Previously Presented) The controller according to claim 50, wherein said controller is operable to

issue a notification request for requesting a notice of changes of the operation screen information to said device when the operation screen information of said device is displayed on the display screen,

receive the version information as the primary response to the notification request, and

receive the updated version information as the secondary response to the notification request when the operation screen information is changed in said device.

54. (Previously Presented) The network control system according to claim 50, wherein the plurality of objects are comprised of invariable objects which are not varied irrespective of the state of said device state and variable objects which are varied in accordance with the state of said device, and

wherein said controller is operable to read the objects from said device, to cache the invariable objects, and to display the objects on the display screen.

55. (Previously Presented) The network control system according to claim 54, wherein said device has an invariable data set comprising invariable objects only and a variable data set comprising variable objects, and

wherein said controller is operable to cache the objects belonging to the invariable data set.

56. (Previously Presented) The device according to claim 54, wherein the plurality of objects are comprised of invariable objects which are not varied irrespective of the state of said device and variable objects which are varied in accordance with the state of said device.

57. (Previously Presented) The controller according to claim 54, wherein said controller is operable to read, from said device, the invariable objects which are not varied irrespective of the state of said device and variable objects which are varied in accordance with the state of said device, to cache the invariable objects, and to display the invariable objects and the variable objects on the display screen.

58. (Previously Presented) The device according to claim 49, wherein said device has the operation screen information that shows the operation screen and version information that shows a version of the operation screen information to be updated when the operation screen information is updated, and the change of the operation screen is indicated by the version information.

59. (Previously Presented) The controller according to claim 49, wherein said controller is operable to read, from said device, the operation screen information that indicates the operation screen of said device and the version information that indicates the version of the operation screen information updated when the operation screen information is updated, and wherein said controller is operable to detect the change of the operation screen information of said device based on the version information.

60. (Previously Presented) The network control system according to claim 42, wherein the version information is a counter value which is incremented each time the in-device apparatus information of said device is updated.

61. (Previously Presented) The device according to claim 42, wherein the in-device apparatus information is state information that indicates a condition of said device, and wherein said device has the state information that shows the condition of said device and the version information that shows the version of the state information to be updated when the state information is updated, and a change of the condition of said device is detected based on the version information.

62. (Previously Presented) The controller according to claim 42, wherein said controller is operable to read state information that indicates a condition of said device and version information that shows a version of the state information from said device to be controlled, and to detect the change of the condition of said device based on the read version information.

63. (Currently Amended) A network control system in an AVC system to which a plurality of AV apparatuses are connected via a transmission line, said network control system comprising:

a controller equipped with a user interface; and
a device operable to be controlled;

wherein said device has a function information table that shows a device function and state of said device, component elements constituting the function information table, and element version information that shows a version of the component elements of the function information table;

wherein said controller is operable to check and read the element version information, and to detect a change of information in the function information table by using the element version information when said controller uses the information in the function information table of the device;

wherein when said controller detects the change of the information in the function information table, said device is operable to automatically send updated element version information, which is indicative of a version of updated component elements in the function information table, to said controller;

wherein every time a change in state in said device occurs, said device is operable to spontaneously or automatically send the updated version information which is indicative of the

change in the state of said device to said controller, without sending a user input request message from said controller to said device;

wherein said controller is operable to receive and read the updated element version information so that the updated information in the function information table is instantly displayed; and

wherein the checking and reading of the element version information is exclusively performed by said controller and is not performed by said device.

64. (Previously Presented) The network control system according to claim 63, wherein said device has function table version information that indicates a version of the function table, and

wherein said controller is operable to detect a change of the information in the function information table by using the function table version information when said controller uses the information in the function table of said device, and to detect a change of information of the component elements by using the element version information when said controller uses the information in the function information table of said device.

65. (Previously Presented) The network control system according to claim 63, wherein said device has a plurality of components that comprise the function table, and the element version information that indicates a version of the components for each component, and

said controller is operable to detect a change of the information of the component information by using the element version information of the component when said controller uses the information in the components of said device.

66. (Previously Presented) The network control system according to claim 63, wherein said controller is operable to

issue a notification request to said device for requesting notification of a change within a notification range by using the information on the notification range indicated by each component when said controller uses the information in the function table of said device,

receive the element version information corresponding to the notification range as a primary response to the notification request, and

receive the updated element version information as a secondary response to the notification request when the information within the notification range is changed.

67. (Previously Presented) The network control system according to claim 66, wherein said controller is operable to read the information within the notification range between receipt of the primary response and the secondary response.

68. (Previously Presented) The network control system according to claim 66, wherein the secondary response from said device contains the updated element version information and updated information.

69. (Previously Presented) The network control system according to claim 63, wherein said device has function table version information that indicates a version of the function table, and the element version information indicating the version of the component is the function table version information when the component information is changed.

70. (Previously Presented) The network control system according to claim 63, wherein the components are menus.

71. (Previously Presented) The network control system according to claim 63, wherein the components are display parts.

72. (Currently Amended) A network control system having a controller and a device to be controlled, said controller being equipped with a user interface and said controller being connected to said device to be controlled via a transmission line,

wherein said device comprises:

apparatus information holding means for holding in-device apparatus information, the in-device apparatus information containing apparatus configuration information which indicates device configuration information and containing operation screen information which indicates a function and condition of said device, and for configuring an operation screen of said device; and

version information generation managing means for generating, when the information held in said apparatus information holding means changes, version information, which is indicative of a change of the in-device apparatus information held in said apparatus information holding means, so as to carry out version management; wherein said controller is operable to issue a notification request to said device for requesting notification of the change of the in-device apparatus information in said device, and to check the version information in said device;

wherein in response to the notification request from said controller, said device is operable to automatically send changed version information to said controller so that the changed version information is instantly displayed;

wherein every time a change in state in said device occurs, said device is operable to spontaneously or automatically send the updated version information which is indicative of the change in the state in said device to said controller, without sending a user input request message from said controller to said device; and

wherein the checking of the version information in said device is exclusively performed by said controller and is not performed by said device.

73. (Previously Presented) The network control system according to claim 72, wherein said version information managing means includes version information generating means for obtaining the version information by incrementing a counter value in said version information generation means each time the in-device apparatus information of said device is changed.

74. (Previously Presented) The network control system according to claim 72, wherein the operation screen information is a table of contents information and action state information that indicate the functions and state of said device, and contains objects which are components of the operation screen information and identifiers for identifying the objects, and

wherein the objects contain a function menu, a display part, text data objects, and still picture data objects.

75. (Previously Presented) The network control system according to claim 72, wherein said controller comprises storing means for storing and controlling the in-device apparatus

information and version information in relation to each other when said controller reads the in-device apparatus information and the version information.

76. (Previously Presented) The network control system according to claim 72, wherein the notification request issued from said controller contains information of a notification range that indicates a range which the controller hopes to bring the information in agreement with the device, and a primary response returned from said device, as the response to the notification request, contains the version information corresponding to the notification range.

77. (Previously Presented) The network control system according to claim 76, wherein when said controller receives a secondary response from said device to the notification request, said controller is operable to detect that the objects in said device are changed, and to send the second notification request to said device before the changed object is requested.

78. (Previously Presented) The network control system according to claim 76, wherein the operation screen information has at least one function menu set list, which each contain function table version information, and each function menu list has the element version information, and wherein said version information generation means generates the function table version information and the element version information.

79. (Previously Presented) The network control system according to claim 76, wherein the version information is included in a menu list response, a display part response and an object response which are returned from said device to said controller.

80. (Currently Amended) A network control method having a controller which is equipped with a user interface and which is connected to a device to be controlled via a transmission line, said method comprising:

holding in-device apparatus information in the device, the in-device apparatus information containing apparatus configuration information which indicates device configuration information and containing operation screen information which indicates a function and condition of the device, and configuring an operation screen of the device;

generating version information, which is indicative of a change of the in-device apparatus information when the in-device apparatus information is changed, so as to carry out version management;

issuing a notification request from the controller to the device for requesting notification of the change of the in-device apparatus in the device;

checking the version information in the device exclusively from the controller and not from the device;

automatically sending a response, which contains changed version information, from the device to the controller to the notification request from the controller so that the changed version information is instantly displayed; and

spontaneously or automatically sending, from the device to the controller, the changed version information, which is indicative of a change in a state in the device, every time the state in the device changes, without sending a user input request message from the controller to the device.

81. (Previously Presented) The network control method according to claim 80, further comprising obtaining the version information by incrementing a counter value each time the in-device apparatus information is updated.

82. (Previously Presented) The network control method according to claim 80, further comprising:

issuing the notification request from the controller to the device;

sending, from the device to the controller, a primary response and a secondary response in response to the notification request from the controller;

judging, in the controller, when the controller receives the secondary response, that the version information is changed by using an identifier of updated in-device apparatus information contained in the secondary response; and

reading the updated in-device apparatus information and updating the version information in the controller.